WEST Search History

DATE: Wednesday, November 27, 2002

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=OR		
L23	L21 and l18	7	L23
L22	L21 not l18	351	L22
L21	L20 and @ad<19990729	358	L21
L20	L19 and l3	497	L20
L19	L1 and (anionic or cationic).clm.	1019	L19
L18	L17 and @ad<19990729	69	L18
L17	L16 and l11	131	L17
L16	l15 and l3	203	L16
L15	l9 and l1	622	L15
L14	L13 and l3	7	L14
L13	L12 and l1	30	L13
L12	(poly adj (alpha-hydroxy adj acid)) or (poly?alpha-hydroxy adj acid)	204	L12
L11	l9 and l8	131	L11
L10	l9 and l8L9	0	L10
L9	(polyhydroxybutyric or polycaprolactone or polyorthoester or polyanhydride or polycyanoacrylate) and l1	622	L9
L8	L6	796	L8
L7	L6	796	L7
L6	L5 and polymer	796	L6
L5	L4 and pharmaceutical	879	L5
L4	l3 and l2	2336	L4
L3	(cationic or anionic) same (surfactant or (surface adj modif$7) or (bioactive adj agent) or detergent or (emulsion adj stabiliz$3))	68953	L3
L2	(microparticle or nanoparticle or partic$5 adj carrier or microsphere) and (cationic or anionic)	6258	L2
L1	(microparticle or nanoparticle or partic$5 adj carrier or microsphere) and (cationic or anionic)	6258	L1

END OF SEARCH HISTORY

STN Search History

L1 QUE (MICROPARTICLE OR NANOPARTICLE OR (PARTIC##### (A) CARRIER) OR MICROSP HERE) AND (CATIONIC OR ANIONIC)

L2 2716 (MICROPARTICLE OR NANOPARTICLE OR (PARTIC##### (A) CARRIER) OR MICROSPHERE) AND (CATIONIC OR ANIONIC)

L3 72723 (CATIONIC OR ANIONIC) (P) (SURFACTANT OR (SURFACE (A) MODIF##### ##) OR (BIOACTIVE (A) AGENT) OR DETERGENT OR (EMULSION (A) STABI LIZ###))

L6 12 L5 AND (POLYHYDROXYBUTYRIC OR POLYCAPROLACTONE OR POLYORTHOESTE R OR POLYANHYDRIDE OR POLYCYANOACRYLATE)

L7 5184 (MICROPARTICLE OR NANOPARTICLE OR PARTIC5 ADJ CARRIER OR MICROSP HERE) (P) (ANTIGEN OR !DNA OR !RNA OR (NUCLEIC (A) ACID))

L9 5361 (MICROPARTICLE OR NANOPARTICLE OR PARTIC##### (A) CARRIER OR MICROSPHERE) (P) (ANTIGEN OR !DNA OR !RNA OR (NUCLEIC (A) ACID))

L10 7445 (MICROPARTICLE OR NANOPARTICLE OR (PARTIC##### (A) CARRIER) OR MICROSPHERE) (P) (ANTIGEN OR DNA OR RNA OR (NUCLEIC (A) ACID))

(FILE 'HOME' ENTERED AT 09:25:13 ON 27 NOV 2002)

INDEX 'ADISALERTS, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 09:25:46 ON 27 NOV 2002

SEA (MICROPARTICLE OR NANOPARTICLE OR (PARTIC##### (A) CARRIER)

1	FILE ADISALERTS
1	FILE ADISINSIGHT
2	FILE ADISNEWS
8	FILE AGRICOLA
4	FILE ANABSTR
15	FILE BIOBUSINESS
1	FILE BIOCOMMERCE
147	FILE BIOSIS
33	FILE BIOTECHABS
33	FILE BIOTECHDS
103	FILE BIOTECHNO
7	FILE CABA
40	FILE CANCERLIT
1256	FILE CAPLUS
15	FILE CEABA-VTB
11	FILE CEN
3	FILE CIN
5	FILE CONFSCI
2	FILE CROPU
1	FILE DDFB
51	FILE DDFU
55	FILE DGENE
1	FILE DRUGB
86	FILE DRUGU
6	FILE EMBAL
205	FILE EMBASE
53	FILE ESBIOBASE
5	FILE FEDRIP
3	FILE FSTA
1	FILE GENBANK

```
              335   FILE IFIPAT
               82   FILE JICST-EPLUS
                5   FILE KOSMET
               29   FILE LIFESCI
              167   FILE MEDLINE
                1   FILE NIOSHTIC
              387   FILE PASCAL
                1   FILE PHAR
                5   FILE PHIN
               73   FILE PROMT
              554   FILE SCISEARCH
              126   FILE TOXCENTER
             6043   FILE USPATFULL
               97   FILE USPAT2
                1   FILE VETU
              479   FILE WPIDS
              479   FILE WPINDEX
               42   FILE IPA
               38   FILE NLDB
L1               QUE (MICROPARTICLE OR NANOPARTICLE OR (PARTIC##### (A) CARRIER)
                 ---------

     FILE 'MEDLINE, PASCAL, CAPLUS, BIOSIS, EMBASE, SCISEARCH' ENTERED AT
     09:31:36 ON 27 NOV 2002
L2          2716 S (MICROPARTICLE OR NANOPARTICLE OR (PARTIC##### (A) CARRIER) O
L3         72723 S (CATIONIC OR ANIONIC) (P) (SURFACTANT OR (SURFACE (A) MODIF##
L4           777 S L2 AND L3
L5           531 DUP REM L4 (246 DUPLICATES REMOVED)
L6            12 S L5 AND (POLYHYDROXYBUTYRIC OR POLYCAPROLACTONE OR POLYORTHOE
L7          5184 S (MICROPARTICLE OR NANOPARTICLE OR PARTIC5 ADJ CARRIER OR MICR
L8           180 S L7 AND L2
L9          5361 S (MICROPARTICLE OR NANOPARTICLE OR PARTIC##### (A) CARRIER OR
L10         7445 S (MICROPARTICLE OR NANOPARTICLE OR (PARTIC##### (A) CARRIER) O
L11          380 S L10 AND L2
L12          173 DUP REM L11 (207 DUPLICATES REMOVED)
L13           40 S L12 AND L3
L14           34 S L13 NOT L6
```

=> d 16 1-12 bib,abs

L6 ANSWER 1 OF 12 PASCAL COPYRIGHT 2002 INIST-CNRS. ALL RIGHTS RESERVED.
AN 1999-0089158 PASCAL
CP Copyright .COPYRGT. 1999 INIST-CNRS. All rights reserved.
TIEN A novel laser light-scattering study of enzymatic biodegradation of poly(.epsilon.-caprolactone) **nanoparticles**
AU ZHIHUA GAN; JIM TSZ FUNG; XIABIN JING; CHI WU; KULICHE W.-K.
CS Polymer Physics Laboratory, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, Jilin, China; Department of Chemistry, The Chinese University of Hong Kong, Shatin, Hong Kong; Department of Chemical Physics, The Open Laboratory of Bond-Selective Chemistry, University of Science and Technology of China, Hefei, Anhui, Germany, Federal Republic of; Institute of Technical and Macromolecular Chemistry, University Hamburg, Germany, Federal Republic of
SO Polymer : (Guildford), (1999), 40(8), 1961-1967, 31 refs.
ISSN: 0032-3861 CODEN: POLMAG
DT Journal
BL Analytic
CY United Kingdom
LA English
AV INIST-11463, 354000073672620060
CP Copyright .COPYRGT. 1999 INIST-CNRS. All rights reserved.
AB A successful micronization of water-insoluble poly(.epsilon.-caprolactone) (PCL) into narrowly distributed **nanoparticles** stable in water has not only enabled us to study the enzymatic biodegradation of PCL in water at 25.degree.C by a combination of static and dynamic laser light scattering (LLS), but also to shorten the biodegradation time by a factor of more than 10.sup.3 compared with using a thin PCL film, i.e. a 1 week conventional experiment becomes a 4 min one. The time-average scattering intensity decreased linearly. It was interesting to find that the decrease of the scattering intensity was not accompanied by a decrease of the average size of the PCL **nanoparticles**, indicating that the enzyme, Lipase Pseudomonas (PS), "eats" the PCL **nanoparticles** one-by-one, so that the biodegradation rate is determined mainly by the enzyme concentration. Moreover, we found that using **anionic** sodium lauryl sulphate instead of **cationic** hexadecyltrimethylammonium bromide as **surfactant** in the micronization can prevent the biodegradation, suggesting that the biodegradation involves two essential steps: the adsorption of slightly negatively charged Lipase PS onto the PCL **nanoparticles** and the interaction between Lipase PS and PCL.

L6 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 2002:256027 CAPLUS
DN 136:299700
TI Polyester **microparticle** compositions for drug delivery
IN Fang, Jia-Hwa; Singh, Manmohan; O'Hagan, Derek; Hora, Maninder
PA Chiron Corporation, USA
SO PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002026212	A2	20020404	WO 2001-US30541	20010928

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,

RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN,
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

	AU 2001094898	A5	20020408	AU 2001-94898	20010928
	US 2002136776	A1	20020926	US 2001-967462	20010928
PRAI	US 2000-236077P	P	20000928		
	WO 2001-US30541	W	20010928		

AB **Microparticles** with adsorbed complexes of macromol. and **detergent**, methods of making such **microparticles**, and uses thereof, are disclosed. The **microparticles** comprise a polymer, such as a poly(.alpha.-hydroxy acid), a **polyhydroxybutyric** acid, a **polycaprolactone**, a **polyorthoester**, a **polyanhydride**, and the like, and are formed using **cationic**, **anionic**, or nonionic **detergents**. The surfaces of the **microparticles** have absorbed thereon a complex of biol. active macromols., such as nucleic acids, polypeptides, antigens, and adjuvants, and a **detergent**. Preferred polymers are poly(D,L-lactide-co-glycolides), more preferably those having a lactide/glycolide molar ratio ranging from 40:60 to 60:40 and having a mol. wt. ranging from 30,000 Daltons to 70,000 Daltons. Preferred macromols. are bacterial and viral antigens (such as HIV antigens, meningitis B antigens, streptococcus B antigens, and Influenza A hemagglutinin antigens) as well as polynucleotides that encode for such antigens. Poly(lactide-glycolide) blank **microparticles** were prepd. using CTAB **detergent**.

L6 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 2002:256024 CAPLUS
DN 136:293507
TI **Microparticles** for delivery of the heterologous nucleic acids
IN O'Hagan, Derek; Otten, Gillis; Donnelly, John James; Polo, John M.; Barnett, Susan; Singh, Manmohan; Ulmer, Jeffrey; Dubensky, Thomas W., Jr.
PA Chiron Corporation, USA
SO PCT Int. Appl., 100 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002026209	A2	20020404	WO 2001-US30540	20010928

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,
HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN,
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

	AU 2001094897	A5	20020408	AU 2001-94897	20010928
PRAI	US 2000-236105P	P	20000928		
	US 2001-315905P	P	20010830		
	WO 2001-US30540	W	20010928		

AB **Microparticles** with adsorbent surfaces, methods of making such **microparticles**, and uses thereof, are disclosed. The **microparticles** comprise a polymer, such as a poly(.alpha.-hydroxy acid), a polyhydroxy butyric acid, a **polycaprolactone**, a **polyorthoester**, a **polyanhydride**, and the like, and are

formed using **cationic**, **anionic**, or nonionic **detergents**. Also provided are **microparticles** in the form of submicron emulsions of an oil droplet emulsion having a metabolizable oil and an emulsifying agent. The surface of the **microparticles** efficiently adsorb polypeptides, such as antigens, and nucleic acids, such as ELVIS vectors and other vector constructs, contg. heterologous nucleotide sequences encoding biol. active macromols., such as polypeptides, antigens, and adjuvants. Methods of stimulating an immune response, methods of immunizing a host animal against a viral, bacterial, or parasitic infection, and uses of the **microparticle** compns. for vaccines are also provided.

L6 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 2001:780648 CAPLUS
DN 135:335147
TI Polymer-based injectable sustained release pharmaceutical compositions for peptide and protein drugs
IN Lee, Hee-yong; Lee, Hye-suk; Kim, Jung-soo; Kim, Sang-beom; Lee, Ji-suk; Choi, Ho-il; Chang, Seung-gu
PA Peptron Inc., S. Korea
SO PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001078687	A1	20011025	WO 2001-KR462	20010322
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1187602	A1	20020320	EP 2001-917893	20010322
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRAI	KR 2000-20484	A	20000418		
	KR 2000-49344	A	20000824		
	WO 2001-KR462	W	20010322		

AB Controlled and sustained release injectable pharmaceutical compns. for a biopharmaceutical, such as peptides and proteins are described. Processes for prepn. of an injectable sustained release compn. comprises (i) a step of prepg. biodegradable porous **microspheres** having accessible ionic functional groups, (ii) a step of encapsulating a biopharmaceutical into the **microspheres** through ionic interaction by suspending or equilibrating the **microspheres** in a soln. contg. the biopharmaceutical, and (iii) a step of recovering and freeze-drying the biopharmaceutical-incorporated **microspheres**. For example, **microspheres** were prepd. by water/oil/water double emulsion solvent evapn. method using a hydrophilic 50:50 PLGA polymer (RG 502H), which contains free carboxy end groups. Deionized water (800 mL) was added to 1 g of PLGA polymer dissolved in 2 mL of methylene chloride and emulsified by sonication for 30 s using a probe type ultrasonic generator. This primary emulsion was dispersed into 200 mL of deionized water contg. 0.5% polyvinyl alc. (wt./vol.) in a vessel which connected to a const. temp. controller and mixed well by stirring for 15 min at 2500 rpm, 25.degree. using a mixer. After mixing for another 15 min at 1500 rpm,

25.degree., temp. of continuous phase was increased to 40.degree. to evap. methylene chloride. After 1 h stirring at 40.degree., 1500 rpm, temp. was decreased to 25.degree.. The hardened **microspheres** were collected by centrifugation and washed twice with 200 mL of deionized water, and then freeze-dried. The **microspheres** obtained were used for incorporation of protein drugs, i.e., ovalbumin, bovine serum albumin, human growth hormone, RNase A, or lysozyme through ionic interaction by simply soaking and equilibrating the **microspheres** into a buffer soln. having an appropriate concn. of protein.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 2001:186765 CAPLUS
DN 134:367633
TI Laser light scattering study of the degradation of poly(sebacic anhydride) **nanoparticles**
AU Fu, Jie; Wu, Chi
CS Open Laboratory of Bond-Selective Chemistry, Department of Chemical Physics, University of Science and Technology of China, Hefei, Peop. Rep. China
SO Journal of Polymer Science, Part B: Polymer Physics (2001), 39(6), 703-708
CODEN: JPBPEM; ISSN: 0887-6266
PB John Wiley & Sons, Inc.
DT Journal
LA English
AB Poly(sebacic anhydride) (PSA) is biocompatible and degradable in basic media. We micronized this water-insol. polymer into stable polymeric **nanoparticles** via a microphase inversion. Such PSA **nanoparticles** degraded much faster than bulk PSA. The influence of the surfactant, temp., and pH on the degrdn. of the PSA **nanoparticles** was investigated by a combination of static and dynamic laser light scattering. Under each condition, the degrdn. rate was nearly const. up to a 75% wt. loss; i.e., the degrdn. was close to zero-order. The degrdn. rate increased with the pH and temp. Biomedical applications of such PSA **nanoparticles** are suggested.

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 2000:655092 CAPLUS
DN 134:208234
TI Synthesis of poly(L,L-Lactide) **microspheres** rich in functional groups at surface layer
AU Gadzinowski, Marlusz; Slomkowski, I, Stanislaw; Ela Ssari, Abdelhamid; Pichot, Christian
CS Center of Molecular and Macromolecular Studies, Polish Academy of Sciences, Pol.
SO Zeszyty Naukowe Politechniki Slaskiej, Chemia (1999), 140, 101-103
CODEN: ZNSCAM; ISSN: 0372-9494
PB Wydawnictwo Politechniki Slaskiej
DT Journal
LA English
AB We obtained poly(.epsilon.-caprolactone) and polylactide **microspheres** directly in pseudoanionic and **anionic** dispersion polymn. The **microspheres** were transferred from hydrocarbon to aq. medium by a controlled surface hydrolysis. During this process carboxylic groups were formed and these groups could be used for covalent immobilization of compds. with -NH2 groups.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 2000:608550 CAPLUS
DN 133:213150
TI Microemulsions with adsorbed macromolecules and **microparticles** for stimulation of immunity
IN O'Hagan, Derek; Ott, Gary S.; Donnelly, John; Kazzaz, Jina; Ugozzoli, Mildred; Singh, Manmohan; Barackman, John
PA Chiron Corp., USA
SO PCT Int. Appl., 95 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000050006	A2	20000831	WO 2000-US3331	20000209
	WO 2000050006	A3	20010118		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1156781	A2	20011128	EP 2000-907228	20000209
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002537102	T2	20021105	JP 2000-600618	20000209
PRAI	US 1999-121858P	P	19990226		
	US 1999-146391P	P	19990729		
	US 1999-161997P	P	19991028		
	WO 2000-US3331	W	20000209		

AB **Microparticles** with adsorbent surfaces, methods of making such **microparticles**, and uses thereof, are disclosed. The **microparticles** comprise a polymer, such as a poly(.alpha.-hydroxy acid), a polyhydroxy butyric acid, a **polycaprolactone**, a **polyorthoester**, a **polyanhydride**, and the like, and are formed using **cationic**, **anionic**, or nonionic **detergents**. The surface of the **microparticles** efficiently adsorb biol. active macromols., such as DNA, polypeptides, antigens, and adjuvants. Also provided are compns. of an oil droplet emulsion having a metabolizable oil and an emulsifying agent. Immunogenic compns. having an immunostimulating amt. of an antigenic substance, and an immunostimulating amt. of an adjuvant compn. are also provided. Methods of stimulating an immune response, methods of immunizing a host animal against a viral, bacterial, or parasitic infection, and methods of increasing a Th1 immune response in a host animal by administering to the animal an immunogenic compn. of the **microparticles**, and/or microemulsions of the invention, are also provided.

L6 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 2000:98273 CAPLUS
DN 132:156846
TI **Microparticles** with adsorbent surfaces, methods of making same, and uses thereof
IN O'Hagen, Derek; Singh, Manmohan; Ott, Gary S.; Barackman, John; Kazzaz, Jina
PA Chiron Corporation, USA

SO PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000006123	A1	20000210	WO 1999-US17308	19990729
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2338646	AA	20000210	CA 1999-2338646	19990729
	AU 9952452	A1	20000221	AU 1999-52452	19990729
	EP 1100468	A1	20010523	EP 1999-937664	19990729
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002521425	T2	20020716	JP 2000-561979	19990729
PRAI	US 1998-124533	A	19980729		
	US 1999-285855	A2	19990402		
	WO 1999-US17308	W	19990729		

AB **Microparticles** with adsorbent surfaces, methods of making such **microparticles**, and uses thereof, are disclosed. The **microparticles** comprise a polymer, such as a poly(.alpha.-hydroxy acid), a polyhydroxy butyric acid, a **polycaprolactone**, a **polyorthoester**, a **polyanhydride**, and the like, and are formed using **cationic**, **anionic**, or nonionic **detergents**. The surface of the **microparticles** efficiently adsorbs biol. active macromols., such as DNA, polypeptides, antigens, and adjuvants.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 1999:94671 CAPLUS
DN 130:286934
TI A novel laser light-scattering study of enzymic biodegradation of poly(.epsilon.-caprolactone) **nanoparticles**
AU Gan, Zhihua; Fung, Jim Tsz; Jing, Xiabin; Wu, Chi; Kuliche, W.-K.
CS Polymer Physics Laboratory, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Jilin, Peop. Rep. China
SO Polymer (1998), Volume Date 1999, 40(8), 1961-1967
CODEN: POLMAG; ISSN: 0032-3861
PB Elsevier Science Ltd.
DT Journal
LA English
AB A successful micronization of water-insol. poly(.epsilon.-caprolactone) (PCL) into narrowly distributed **nanoparticles** stable in water not only enabled us to study the enzymic biodegrdn. of PCL in water at 25.degree. by a combination of static and dynamic laser light scattering (LLS), but also to shorten the biodegrdn. time by a factor of more than 103 compared with using a thin PCL film, i.e. a 1 wk conventional expt. becomes a 4 min one. The time-av. scattering intensity decreased linearly. The decrease of the scattering intensity was not accompanied by a decrease of the av. size of the PCL **nanoparticles**, indicating that the enzyme, lipase of Pseudomonas (PS), "eats" the PCL

nanoparticles one-by-one, so that the biodegrdn. rate is detd. mainly by the enzyme concn. Using **anionic** sodium lauryl sulfate instead of **cationic** hexadecyltrimethylammonium bromide as **surfactant** in the micronization can prevent the biodegrdn., suggesting that the biodegrdn. involves 2 essential steps: the adsorption of slightly neg. charged lipase PS onto the PCL **nanoparticles** and the interaction between Lipase PS and PCL.

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 1996:544101 CAPLUS
DN 125:177462
TI Surface-modified **nanoparticles** and method of making and using them
IN Levy, Robert J.; Labhasetwar, Vinod; Song, Cunxian S.
PA USA
SO PCT Int. Appl., 170 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9620698	A2	19960711	WO 1996-US476	19960104
	WO 9620698	A3	19980122		
	W: AL, AM, AT, AU, CA, CH, CN, CZ, DE, DK, GB, HU, IS, JP, KE, LU, VN, MN, NO, US				
	RW: KE, LS, SD, AT, BE, CH, DE, ES, FR, GB, IT, LU, NL, PT, SE, NL, MR, NE, SN				
	CA 2207961	AA	19960711	CA 1996-2207961	19960104
	AU 9647556	A1	19960724	AU 1996-47556	19960104
	EP 805678	A1	19971112	EP 1996-903476	19960104
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
	JP 10511957	T2	19981117	JP 1996-521279	19960104
PRAI	US 1995-369541		19950105		
	US 1995-389893		19950216		
	WO 1996-US476		19960104		

AB Biodegradable controlled-release **nanoparticles** as sustained release bioactive agent delivery vehicles include surface modifying agents to target binding of the **nanoparticles** to tissues or cells of living systems, to enhance **nanoparticle** sustained release properties, and to protect **nanoparticle**-incorporated bioactive agents. Unique methods of making small (10 nm to 15 nm, and preferably 20 nm to 35 nm) **nanoparticles** having a narrow size distribution which can be surface-modified after the **nanoparticles** are formed is described. Techniques for modifying the surface include a lyophilization technique to produce a phys. adsorbed coating and epoxy-derivatization to functionalize the surface of the **nanoparticles** to covalently bind mols. of interest. The **nanoparticles** may also comprise hydroxy-terminated or epoxide-terminated and/or activated multiblock copolymers, having hydrophobic segments which may be **polycaprolactone** and hydrophilic segments. The **nanoparticles** are useful for local intravascular administration of smooth muscle inhibitors and antithrombogenic agents as part of interventional cardiac or vascular catheterization such as a balloon angioplasty procedure; direct application to tissues and/or cells for gene therapy, such as the delivery of osteotropic genes or gene segments into bone progenitor cells; or oral administration in an enteric capsule for delivery of protein/peptide based vaccines.

L6 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 1993:45594 CAPLUS
DN 118:45594
TI In-vitro release kinetics of timolol and timolol maleate from poly(ethyl cyanoacrylate) **nanoparticles**: II. **Nanoparticles** manufactured with timolol maleate using different surfactants and organic solvents
AU Harmia-Pulkkinen, T.; Ojantakanen, S.
CS Dep. Pharm., Univ. Helsinki, Helsinki, SF-00170, Finland
SO Acta Pharmaceutica Fennica (1992), 101(2), 57-63
CODEN: APHFDO; ISSN: 0356-3456
DT Journal
LA English
AB In this study the manufg. of poly(Et cyanoacrylate) **nanoparticles** with timolol maleate by **anionic** polymn. was investigated. Different nonionic **surfactants** and org. solvents were used for the solubilization of timolol maleate in order to polymerize these solubilized solns. with Et cyanoacrylate. The effect of both, the drug and water concn. of the micelles on the in vitro drug release rate of the **nanoparticles** was studied. It was shown that the solubilization and polymn. were most successful using polyoxyethylated nonionic **surfactants** and n-alkanes as solvents for solubilization. About 90% of the initial timolol maleate concn. could be solubilized into the **nanoparticles**. The incorporation was neither affected by the drug concn. nor by the water content of the micelles. With this system a drug release rate of zero-order could not been achieved: the release of timolol maleate was rather controlled by its diffusion through the matrix following the cube root equation.

L6 ANSWER 12 OF 12 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 2002381656 EMBASE
TI Design of poly-.epsilon.-caprolactone nanospheres coated with bioadhesive hyaluronic acid for ocular delivery.
AU Barbault-Foucher S.; Gref R.; Russo P.; Guechot J.; Bochot A.
CS A. Bochot, CNRS 8612, Faculte de Pharmacie, Universite de Paris-Sud, 5 Rue Jean-Baptiste Clement, 92296 Chatenay Malabry Cedex, France. amelie.bochot@cep.u-psud.fr
SO Journal of Controlled Release, (30 Oct 2002) 83/3 (365-375).
Refs: 35
ISSN: 0168-3659 CODEN: JCREEC
PUI S 0168-3659(02)00207-9
CY Netherlands
DT Journal; Article
FS 037 Drug Literature Index
039 Pharmacy
LA English
SL English
AB This study was performed to design a new ocular drug delivery system based on poly-.epsilon.-caprolactone (PCL) biodegradable nanospheres (NS) coated with a bioadhesive polymer, hyaluronic acid (HA), in order to combine ophthalmic prolonged action with the ease of application. The aim of this work was to investigate three strategies to attach HA on NS surface: (1) coating the core by chain entanglement with HA; (2) coating NS by HA adsorption; (3) coating NS by electrostatic interactions between negatively charged HA and a **cationic surfactant** (stearylamine, SA, or benzalkonium chloride, BKC). A radioimmunoassay technique, usually used for HA quantification in serum, was transposed to determine the amount of HA on the NS. The results show that HA is strongly attached on NS positively charged by **cationic surfactant**. This system is stable and not influenced by dilution. These results show

the possibility of using **cationic surfactants** to obtain a HA coating by electrostatic interactions. BKC, approved for ophthalmic administration, was retained because it was more firmly anchored within the PCL matrix and the amount of HA attached was high (41.6 .mu.g HA/mg PCL). Moreover, the yield of fixation reached 50%. Therefore, by using a simple preparation method, it was possible to obtain stable HA and intact HA-coated NS.

=> d l14 1-34 bib,abs

L14 ANSWER 1 OF 34 MEDLINE
AN 2002680722 IN-PROCESS
DN 22328768 PubMed ID: 12440869
TI Plasmid **DNA**-Entrapped **Nanoparticles** Engineered from Microemulsion Precursors: In Vitro and in Vivo Evaluation.
AU Cui Zhengrong; Mumper Russell J
CS Division of Pharmaceutical Sciences, College of Pharmacy, University of Kentucky, Lexington, Kentucky 40536-0082.
SO BIOCONJUGATE CHEMISTRY, (2002 Nov-Dec) 13 (6) 1319-27.
Journal code: 9010319. ISSN: 1043-1802.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS IN-PROCESS; NONINDEXED; Priority Journals
ED Entered STN: 20021121
Last Updated on STN: 20021121
AB Nonviral gene therapy has been a rapidly growing field. However, delivery systems that can provide protection for pDNA and potential targeting are still desired. A novel pDNA-**nanoparticle** delivery system was developed by entrapping hydrophobized pDNA inside **nanoparticles** engineered from oil-in-water (O/W) microemulsion precursors. Plasmid **DNA** was hydrophobized by complexing with **cationic surfactants** DOTAP and DDAB. Warm O/W microemulsions were prepared at 50-55 degrees C with emulsifying wax, Brij 78, Tween 20, and Tween 80. **Nanoparticles** were engineered by simply cooling the O/W microemulsions containing the hydrophobized pDNA in the oil phase to room temperature while stirring. The **nanoparticles** were characterized by particle sizing, zeta-potential, and TEM. **Nanoparticles** were challenged with serum nucleases to assess pDNA stability. In addition, the **nanoparticles** were coincubated with simulated biological media to assess their stability. In vitro hepatocyte transfection studies were completed with uncoated **nanoparticles** or **nanoparticles** coated with pullulan, a hepatocyte targeting ligand. In vivo biodistribution of the **nanoparticles** containing I-125 labeled pDNA was monitored 30 min after tail-vein injection to Balb/C mice. Depending on the hydrophobizing lipid agent employed, uniform pDNA-entrapped **nanoparticles** (100-160 nm in diameter) were engineered within minutes from warm O/W microemulsion precursors. The **nanoparticles** were negatively charged (-6 to -15 mV) and spherical. An **anionic** exchange column was used to separate unentrapped pDNA from **nanoparticles**. Gel permeation chromatography of pDNA-entrapped and serum-digested **nanoparticles** showed that the incorporation efficiency was approximately 30%. Free 'naked' pDNA was completely digested by serum nucleases while the entrapped pDNA remained intact. Moreover, in vitro transfection studies in Hep G2 cells showed that pullulan-coated **nanoparticles** resulted in enhanced luciferase expression, compared to both pDNA alone and uncoated **nanoparticles**. Preincubation of the cells with free pullulan inhibited the transfection. Finally, 30 min after tail vein injection to mice, only 16% of the 'naked' pDNA remained in the circulating blood compared to over 40% of the entrapped pDNA. Due to the apparent stability of these pDNA-entrapped **nanoparticles** in the blood, they may have potential for systemic gene therapy applications requiring cell and/or tissue-specific delivery.

L14 ANSWER 2 OF 34 MEDLINE
AN 2002494867 IN-PROCESS
DN 22243086 PubMed ID: 12356273

TI Intranasal administration of plasmid **DNA**-coated **nanoparticles** results in enhanced immune responses.
AU Cui Zhengrong; Mumper Russell J
CS Division of Pharmaceutical Sciences, College of Pharmacy, University of Kentucky, Lexington 40536-0082, USA.
SO JOURNAL OF PHARMACY AND PHARMACOLOGY, (2002 Sep) 54 (9) 1195-203. Journal code: 0376363. ISSN: 0022-3573.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS IN-PROCESS; NONINDEXED; Priority Journals
ED Entered STN: 20021002
Last Updated on STN: 20021002
AB Intranasal immunization offers potential forthe elicitation of effective mucosal and systemic immune responses. In this study, a previously reported novel **cationic nanoparticle** engineered from a microemulsion precursor was further modified, optimized and applied intranasally to mice to explore its potential as a plasmid **DNA** (pDNA) vaccine delivery system. To this end, more uniform **nanoparticles** (around 100 nm) containing less **cationic surfactant** were developed. The pDNA-coated **nanoparticles** significantly enhanced the specific serum IgG and IgA titres to an expressed model **antigen**, beta-galactosidase, by 18-28 and 25-30 fold, respectively, when compared with naked pDNA alone. An enhanced splenocyte proliferative response was also observed after immunization with the pDNA-coated **nanoparticles**. It was concluded that these plasmid **DNA**-coated **nanoparticles** may have potential for immunization via the nasal route.

L14 ANSWER 3 OF 34 MEDLINE
AN 2002423685 IN-PROCESS
DN 22167846 PubMed ID: 12180545
TI Genetic immunization using **nanoparticles** engineered from microemulsion precursors.
AU Cui Zhengrong; Mumper Russell J
CS Division of Pharmaceutical Sciences, College of Pharmacy, University of Kentucky, Lexington 40536-0082, USA.
SO PHARMACEUTICAL RESEARCH, (2002 Jul) 19 (7) 939-46. Journal code: 8406521. ISSN: 0724-8741.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS IN-PROCESS; NONINDEXED; Priority Journals
ED Entered STN: 20020816
Last Updated on STN: 20020816
AB PURPOSE: Genetic immunization using "naked" plasmid **DNA** (pDNA) has been shown to elicit broad humoral and cellular immune responses. However, more versatile and perhaps cell-targeted delivery systems are needed. To this end, a novel process to engineer **cationic nanoparticles** coated with pDNA for genetic immunization was explored. METHODS; **Cationic nanoparticles** were engineered from warm oil-in-water microemulsion precursors composed of emulsifying wax as the oil phase and cetyltrimethylammonium bromide (CTAB) as the **cationic surfactant**. Plasmid **DNA** was coated on the surface of the **cationic nanoparticles** to produce pDNA-coated **nanoparticles**. An endosomolytic lipid and/or a dendritic cell-targeting ligand (mannan) were incorporated in or deposited on the **nanoparticles** to enhance the in vitro cell transfection efficiency and the in vivo immune responses after subcutaneous injection to Balb/C mice. The IgG titer to expressed beta-galactosidase and the cytokine release from isolated splenocytes

after stimulation were determined on 28 days. RESULTS: **Cationic nanoparticles** (around 100 nm) were engineered within minutes. The pDNA-coated **nanoparticles** were stable at 37 degrees C over 30 min in selected biologic fluids. Transmission electron microscopy showed the **nanoparticles** were spherical. Plasmid **DNA**-coated **nanoparticles**. especially those with both an endosomolytic lipid and dendritic cell-targeting ligand. resulted in significant enhancement in both IgG titer (over 16-fold) and T-helper type-1 (Th1-type) cytokine release (up to 300% increase) over "naked" pDNA. CONCLUSION: A novel method to engineer pDNA-coated **nanoparticles** for enhanced in vitro cell transfection and enhanced in vivo immune responses was reported.

L14 ANSWER 4 OF 34 MEDLINE
AN 2002253177 MEDLINE
DN 21988252 PubMed ID: 11992690
TI Topical immunization using nanoengineered genetic vaccines.
AU Cui Zhengrong; Mumper Russell J
CS Division of Pharmaceutical Sciences, College of Pharmacy, University of Kentucky, Lexington, KY 40536-0082, USA.
SO JOURNAL OF CONTROLLED RELEASE, (2002 May 17) 81 (1-2) 173-84.
Journal code: 8607908. ISSN: 0168-3659.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200208
ED Entered STN: 20020507
Last Updated on STN: 20020806
Entered Medline: 20020805
AB **DNA** vaccines have been shown to elicit both broad humoral and cellular immune responses. Needle-free injection devices and the gene gun have been used to deliver these **DNA** vaccines to dendritic cells in the viable skin epidermis with some success. However, more cost-effective and dendritic cell (DC)-targeted immunization strategies are sought. To this end, a nanoengineered genetic vaccine for simple topical application was developed. Expressed beta-galactosidase was used as a model **antigen**. Plasmid **DNA** was coated on the surface of preformed **cationic nanoparticles** engineered directly from warm oil-in-water (O/W) microemulsion precursors comprised of emulsifying wax as the oil phase and CTAB as a **cationic surfactant**. Mannan, a DC ligand, was coated on the **nanoparticles** with and without entrapped endosomolytic agents, dioleoyl phosphatidylethanolamine (DOPE) and cholesterol. In-vitro cell transfection studies were performed to confirm transgene expression with these pDNA-coated **nanoparticles**. An in-vitro Concanavalin A (ConA) agglutination assay confirmed the presence of mannan on the surface of **nanoparticles**. The humoral and proliferative immune responses were assessed after topical application of these nanoengineered systems to the skin of shaved Balb/C mice. All pDNA-coated **nanoparticles**, especially the mannan-coated pDNA-**nanoparticles** with DOPE, resulted in significant enhancement in both **antigen**-specific IgG titers (16-fold) and splenocyte proliferation over 'naked' pDNA alone.

L14 ANSWER 5 OF 34 MEDLINE
AN 2001471718 MEDLINE
DN 21407536 PubMed ID: 11516788
TI Intranasal vaccination against plague, tetanus and diphtheria.
AU Alpar H O; Eyles J E; Williamson E D; Somavarapu S
CS School of Pharmacy, University of London, 29-39 Brunswick Square, WC1N 1AX, London, UK.. oya.alpar@ams1.ulsop.ac.uk

SO Adv Drug Deliv Rev, (2001 Sep 23) 51 (1-3) 173-201. Ref: 140
Journal code: 8710523. ISSN: 0169-409X.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200110
ED Entered STN: 20010823
Last Updated on STN: 20011008
Entered Medline: 20011004
AB Plague is an extremely virulent and potentially lethal infection caused by the bacterium Y. pestis. The current vaccine used to immunise against plague often fails to engender solid (100%) protection against inhalational infection with Y. pestis. Similarly, logistical factors favour the development of non-parenteral immunisation protocols to counter plague. Recently an improved parenteral vaccination strategy for plague, based on the recombinant subunit approach, has entered clinical trails. The Yersinia pestis subunit **antigens** (F1 and V) have been successfully incorporated into novel vaccine delivery systems such as biodegradable **microspheres** composed of poly-L-(lactide) (PLLA). Intranasal and intratracheal administration of PLLA microencapsulated F1 and V serves to protect experimental animals from inhalational and subcutaneous challenge with virulent Y. pestis bacilli. Liposomes have also been used to improve the immunogenicity of intranasally administered Y. pestis **antigens**, and the effectiveness of this approach to plague immunisation has been evaluated. Tetanus and diphtheria still cause many deaths worldwide. The maintenance of protective immunity to diphtheria and tetanus requires booster injections of the currently licensed toxoid vaccines. Consequently, many people remain unprotected. Improved coverage may well result from the development of effective non-invasive vaccines that could be readily distributed and potentially self-administered. To this end, the intranasal and inhalational routes of administration have been extensively investigated. Tetanus and diphtheria toxoids have been delivered intranasally to experimental animals using a wide variety of adjuvants (enterotoxin derivatives), penetration enhancers (cyclodextrins, bile salts, **surfactants**, **cationic** polymers) and delivery systems (**microspheres** and liposomes). As compared with parenteral vaccination, nasal immunisation has been shown favourably effective in small animal models, and a limited number of early phase clinical trails. As a caveat to this, adjuvantisation of toxoid/subunit molecules appears to be a requisite for elicitation of appreciable immunological responses, following nasal administration of acellular immunogens. Testing in larger animal models and humans is needed to ascertain if the promising results obtained in rodents can be reciprocated without compromising safety.

L14 ANSWER 6 OF 34 MEDLINE
AN 2001191477 MEDLINE
DN 21127468 PubMed ID: 11223992
TI Plasmid **DNA** adsorbed onto **cationic** **microparticles** mediates target gene expression and **antigen** presentation by dendritic cells.
AU Denis-Mize K S; Dupuis M; MacKichan M L; Singh M; Doe B; O'Hagan D; Ulmer J B; Donnelly J J; McDonald D M; Ott G
CS Department of Anatomy, and Cardiovascular Research Institute, University of California San Francisco, San Francisco, CA, USA.
NC HL24136 (NHLBI)
SO GENE THERAPY, (2000 Dec) 7 (24) 2105-12.
Journal code: 9421525. ISSN: 0969-7128.

CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200104
ED Entered STN: 20010502
Last Updated on STN: 20010502
Entered Medline: 20010426
AB Dendritic cells (DC) play a key role in **antigen** presentation and activation of specific immunity. Much current research focuses on harnessing the potency of DC for vaccines, gene therapy, and cancer immunotherapy applications. However, DC are not readily transfected in vitro by traditional nonviral techniques. A novel **DNA** vaccine formulation was used to determine if DC are transfected in vitro. The formulation consists of plasmid **DNA** adsorbed on to **cationic microparticles** composed of the biodegradable polymer polylactide-co-glycolide (PLG) and the **cationic surfactant**, cetyltrimethylammonium bromide (CTAB). Using preparations of fluorescent-labeled plasmid **DNA** formulated on PLG-CTAB **microparticles** to study internalization by macrophages and dendritic cells in vitro and in vivo, we found that most, but not all, of the fluorescence was concentrated in endosomal compartments. Furthermore, uptake of plasmid **DNA** encoding HIV p55 gag adsorbed to PLG-CTAB **microparticles** by murine bone marrow-derived dendritic cells resulted in target gene expression, as detected by RT-PCR. The **antigen** was subsequently processed and presented, resulting in stimulation of an H-2kd-restricted, gag-specific T cell hybridoma. Activation of the hybridoma, detected by IL-2 production, was dose-dependent in the range of 0.1-20 microg **DNA** (10-2000 microg PLG) and was sustained up to 5 days after transfection. Thus, adsorption of plasmid **DNA** on PLG-CTAB **microparticles** provides a potentially useful nonviral approach for in vitro transfection of dendritic cells. Gene Therapy (2000) 7, 2105-2112.

L14 ANSWER 7 OF 34 MEDLINE
AN 2000426326 MEDLINE
DN 20286709 PubMed ID: 10825566
TI Novel **anionic microparticles** are a potent adjuvant for the induction of cytotoxic T lymphocytes against recombinant p55 gag from HIV-1.
AU Kazzaz J; Neidleman J; Singh M; Ott G; O'Hagan D T
CS Chiron Corporation 4560 Horton St., Emeryville, CA 94608, USA.
SO JOURNAL OF CONTROLLED RELEASE, (2000 Jul 3) 67 (2-3) 347-56.
Journal code: 8607908. ISSN: 0168-3659.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 200009
ED Entered STN: 20000922
Last Updated on STN: 20000922
Entered Medline: 20000914
AB **Microparticles** with entrapped **antigens** have recently been shown to possess significant potential as vaccine delivery systems and adjuvants. However, the potential of **microparticles** as adjuvants has been seriously limited by the common problem of degradation and denaturation of **antigens** following encapsulation and release. To overcome these problems, we have developed a novel way to use **microparticles** as adjuvants, by the adsorption of proteins onto their surface. **Anionic microparticles** were prepared through the inclusion of an **anionic detergent**, sodium

dodecyl sulphate (SDS), in the **microparticle** preparation process. The **anionic microparticles** were capable of the efficient and reproducible adsorption of recombinant p55 gag protein from HIV-1. **Microparticles** with adsorbed p55 were capable of inducing potent cytotoxic T lymphocyte responses in mice following intramuscular immunization. In addition, the **microparticles** also exhibited a potent adjuvant effect for antibody induction against p55.

L14 ANSWER 8 OF 34 MEDLINE
AN 1999449919 MEDLINE
DN 99449919 PubMed ID: 10518683
TI Preparation and characterization of **cationic microspheres** for gene delivery.
AU Esposito E; Sebben S; Cortesi R; Menegatti E; Nastruzzi C
CS Dipartimento di Scienze Farmaceutiche, Universita di Ferrara, Ferrara, Italy.
SO INTERNATIONAL JOURNAL OF PHARMACEUTICS, (1999 Oct 28) 189 (1) 29-41. Journal code: 7804127. ISSN: 0378-5173.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199911
ED Entered STN: 20000113
Last Updated on STN: 20000113
Entered Medline: 19991130
AB The production and characterization of **cationic microparticles** based on Eudragit RS and **cationic** agents (i.e. a **cationic** acrylic polymer and three different **cationic surfactants**) for the delivery of **nucleic acids** is here described. It was found that morphological and dimensional characteristics of **microparticles** were influenced by the type and concentration of **cationic** agent employed and by some experimental parameters such as stirring speed, emulsifying agent and type of rotor. The desoxiribonucleotide Defibrotide (DFT) was associated with positively charged **microparticles** and its in vitro release kinetics from **microparticles** were determined. A study of the in vitro toxicity of **cationic microparticles** on cultured human cell line K562 was also performed, demonstrating that DDAB(18) **microparticles** display very low cytotoxicity.

L14 ANSWER 9 OF 34 MEDLINE
AN 91354536 MEDLINE
DN 91354536 PubMed ID: 1883530
TI Use of liposomes, viral capsids, and **nanoparticles** as **DNA** carriers.
AU Bertling W M; Gareis M; Paspaleeva V; Zimmer A; Kreuter J; Nurnberg E; Harrer P
CS Clinical Research Units Rheumatology, Max-Planck Society, University of Erlangen-Nurnberg, Germany.
SO BIOTECHNOLOGY AND APPLIED BIOCHEMISTRY, (1991 Jun) 13 (3) 390-405. Journal code: 8609465. ISSN: 0885-4513.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199110
ED Entered STN: 19911027
Last Updated on STN: 19970203
Entered Medline: 19911009

AB We tested a variety of liposomes for parameters such as **DNA** binding capacity and DNase I protection of incorporated and attached **DNA** to elucidate their use as vehicles for **DNA** transfer into cells and animals. The results were compared to other potential **DNA** vehicles, empty viral capsids, and **nanoparticles**. Maximal binding capacity was achieved for positively charged **nanoparticles**, DNase I protection was observed for most preparations with neosome preparations being least efficient. The uptake of radiolabeled **DNA** by cells in culture was determined for **cationic** and nonionic **surfactant** vesicles, viral capsids, and **nanoparticles**. Cellular **DNA** uptake was best for dioleoyl-derived positively charged liposomes (N-[1-(2,3-dioleoyloxy)propyl]-N,N,N-trimethylammonium chloride; DOTMA) and the **DNA** could be shown to be physiologically active. The recombination rate for **DNA** fragments transfected in polyoma capsids in live mice was higher than for liposome mediated transfection. Homologous recombination could be observed for both DOTMA and polyoma-mediated **DNA** transfer.

L14 ANSWER 10 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 2002:778642 CAPLUS
DN 137:293542
TI **Microparticles** and methods for delivery of recombinant viral vaccines
IN Hural, John; Johnson, Mark E.; Spies, A. Gregory
PA USA
SO U.S. Pat. Appl. Publ., 15 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002146828	A1	20021010	US 2002-40990	20020107
WO 2002092132	A2	20021121	WO 2002-US235	20020107

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2001-260164P P 20010105
US 2001-333701P P 20011127

AB Disclosed is a viral vector conjugated to a **microparticle**, wherein the viral vector comprises a polynucleotide encoding a heterologous polypeptide. Conjugation of the viral vector to the **microparticle** results in a dramatic increase in the efficacy of the elicited immune response. The **microparticle** has a characteristic length of about 0.5 .mu.m to about 20 .mu.m, comprising a **cationic** lipid, a polymer of a natural or synthetic monomer, or an **anionic surfactant**. Also disclosed is a method for delivering a polynucleotide to a cell comprising contacting the cell with a viral vector of the invention. In a preferred embodiment, the cell is an **antigen**-presenting cell, such as a dendritic cell. The invention further provides a vaccine comprising a viral vector of the invention. The methods is demonstrated by delivering Mycobacterium tuberculosis single **antigen** or multiple **antigens** to APC or dendritic cell. The invention thus provides a method for

delivering a polynucleotide to a subject, a method of stimulating an immune response in a subject, a method of treating cancer in a subject, a method of inhibiting tumor growth in a subject, and a method of treating an infection in a subject.

L14 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 2002:736489 CAPLUS
DN 137:244302
TI Processes for producing coated magnetic **microparticles** and uses thereof
IN Chen, Depu; Cheng, Jing; Fei, Weiyang; Sun, Baoquan; Xie, Xin; Zhang, Xu; Zhou, Yuriang
PA Aviva Biosciences Corporation, USA
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002075309	A1	20020926	WO 2002-US8798	20020320
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CN 1375507	A	20021023	CN 2001-109870	20010320
PRAI CN 2001-109870	A	20010320		

AB This invention relates generally to the field of prodn. of coated magnetizable **microparticles** and uses thereof. In particular, the invention provides a process for producing coated magnetizable **microparticles** with active functional groups which process uses, inter alia, conducting polymn. of said coating monomers on the surface of magnetic particles to form coated magnetizable **microparticles** with active functional groups in the presence of a coupling agent, coating monomers, a functionalization reagent, a crosslinking agent and an initiator in an org. solvent contg. a surfactant. The coated magnetizable **microparticles** produced according to the present processes and uses of the coated magnetizable **microparticles**, e.g., in isolating and/or manipulating various moieties are also provided. Superparamagnetic Fe3O4 nanocrystals were added to toluene and sodium dodecyl benzene sulfonate and dispersed by ultrasound and agitation. A mixt. of 0.227g 2,2'-azobisisobutyronitrile, 2.2 mL monomer pentaerythritol trimethacrylate, 1.5 mL crosslinking trimethylpropane trimethacrylate, 0.4 mL coupling agent bis(2-hydroxyethylmethacrylate) phosphate and 1.8 mL functionalized agent glycidyl acrylate was added into the flask. The mixt. was stirred violently for 30 min under purging with a stream of nitrogen. Then the stirring velocity was lowered to 30 rpm, and the reaction temp. was raised to 76.degree. and maintained for 12 h under nitrogen atm. The coated microbeads were washed and treated with bovine serum albumin before reaction with antibodies to human IgG to make an immunoassay reagent.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 12 OF 34 CAPLUS COPYRIGHT 2002 ACS

AN 2002:614268 CAPLUS
TI Charged PLG **microparticles** for delivery of **DNA** and proteins
AU Singh, Manmohan; Briones, Maylene; Soenawan, Elawati; Ugozolli, Mildred; Kazzaz, Jina; O'Hagan, Derek
CS Chiron Corporation, Emeryville, CA, 94608, USA
SO Abstracts of Papers, 224th ACS National Meeting, Boston, MA, United States, August 18-22, 2002 (2002), BIOT-312 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69CZPZ
DT Conference; Meeting Abstract
LA English
AB We have recently reported the development and use of charged PLG **microparticles** for the delivery of plasmid **DNA** and protein **antigens**. The charged **microparticles** were prepd. using modified solvent-evapn. methods using either **cationic detergents** (CTAB, DOTAP) or **anionic detergents** (SDS,DSS). The charged **microparticles** were characterized by sizing, surface charge measurements, loading levels and release rates measurements. The PLG **microparticle** formulations were also combined with other adjuvants for enhanced immune stimulation. The use of **cationic** PLG **microparticles** for delivering **DNA** vaccines and **anionic** PLG **microparticles** for delivering protein **antigens** resulted in significantly enhanced immune responses to **antigen** of interest in various animal models evaluated. This presentation will discuss the phys. properties,charcterization and in vivo responses obtained with these novel vaccine delivery formulations.

L14 ANSWER 13 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 2002:386130 CAPLUS
DN 137:130235
TI Sizes and conformation of the molecules of DNA-surfactant complexes in dilute solutions and on the atomic smooth substrates
AU Komolov, A. S.; Mel'nikov, A. B.; Schaumburg, K.; Ryumtsev, E. I.; Lezov, A. V.
CS Research Institute of Physics, St. Petersburg State University, Petrodvorets, 198904, Russia
SO Colloid Journal (Translation of Kolloidnyi Zhurnal) (2002), 64(2), 155-159
CODEN: CJRSEQ; ISSN: 1061-933X
PB MAIK Nauka/Interperiodica Publishing
DT Journal
LA English
AB The conformations of the mols. of DNA-surfactant complexes in dil. solns. and on the at. smooth surfaces of mica and highly oriented pyrolytic graphite were comparatively studied by the methods of isothermal diffusion, elec. birefringence, and at. force microscopy. The DNA-surfactant complexes were deposited onto the substrates from a chloroform soln. The no. of particles of the DNA-surfactant complex on the substrate was changed by varying the concn. of the initial soln. within three orders of magnitude. The particles of a shape close to ellipsoidal, 25-70 nm in diam. and 2-4 nm high, were obsd. at the lowest concn. of DNA-surfactant soln. on the mica substrate. The shape and size of these particles correspond to those of a single DNA-surfactant complex, calcd. from its translational diffusion coeff. and the time of orientational relaxation in dil. solns. An increase in the no. of mols. deposited onto the substrate leads to an increase in the characteristic sizes of DNA-surfactant complex particles obsd. by the at. force microscopy. This may be assocd. with the aggregation of DNA-surfactant complexes.
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 14 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 2002:350560 CAPLUS
TI Alternative colloidal carriers for **DNA** delivery: **surface modified** silica and **cationic** solid lipid **nanoparticles**
AU Kneuer, C.; Sameti, M.; Nacken, M.; Olbrich, C.; Bakowsky, U.; Schmidt, H.; Muller, R. H.; Lehr, C. M.
CS Dept. of Biopharmaceutics and Pharmaceutical Technology, Saarland University, Saarbrucken, 66123, Germany
SO Proceedings - 28th International Symposium on Controlled Release of Bioactive Materials and 4th Consumer & Diversified Products Conference, San Diego, CA, United States, June 23-27, 2001 (2001), Volume 2, 1175-1176
Publisher: Controlled Release Society, Minneapolis, Minn.
CODEN: 69CNY8
DT Conference
LA English
AB Cationically **surface modified** silica **nanoparticles** were used to establish correlations between physicochem. and biol. properties relevant to gene delivery. The size could be varied between 10 and 100 nm and a zeta potential of +15 mV was found sufficient for **DNA** binding. An increased degree of modification reduced accessibility of bound **DNA**. Toxicity and transfection efficiency did primarily depend on the nature of the charge carrier and its flexibilty (spacer lenght). These results could be transferred to **cationic** solid lipid **nanoparticles**.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 15 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 2002:185106 CAPLUS
DN 136:252463
TI Acid-sensitive compounds for delivering drugs to the cells
IN Bessodes, Michel; Masson, Christophe; Scherman, Daniel; Wetzer, Barbara
PA Aventis Pharma S.A., Fr.
SO PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002020510	A1	20020314	WO 2001-FR2725	20010903
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	FR 2813605	A1	20020308	FR 2000-11278	20000905
	FR 2813605	B1	20021018		
	AU 2001087801	A5	20020322	AU 2001-87801	20010903
	US 2002091242	A1	20020711	US 2001-972854	20011010
PRAI	FR 2000-11278	A	20000905		
	US 2000-239116P	P	20001011		
	WO 2001-FR2725	W	20010903		

OS MARPAT 136:252463
AB The invention concerns novel acid-sensitive compds. comprising at least a

hydrophilic substituent and a cyclic orthoester which is acid-sensitive, and their salts (Markush structures given) . Said compds. are useful for forming conjugates (liposomes, complexes, **nanoparticles**) with biol. active substances and for releasing them in cell tissues or compartments whereof the pH is acid, either as non-ionic **surfactant** to stabilize particles encapsulating a biol. active substance then destabilizing them in an acid medium, or as vector covalently bound to a therapeutic mol. so as to release said therapeutic mol. in cell tissues or compartments whereof the pH is acid. An octadecanol dioxolan acetamide polyethylene glycol deriv. was prepd. as nonionic **surfactant** for stabilization of **cationic** lipid/**DNA** particles.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 16 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 2001:903792 CAPLUS
DN 136:42838
TI Delivery systems for a peptide, protein or nucleic acid
IN Barman, Shikha P.; McKeever, Una; Hedley, Mary Lynne
PA Zycos Inc., USA
SO PCT Int. Appl., 100 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001093835	A1	20011213	WO 2001-US17971	20010601

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 2000-208830P P 20000602
AB The invention features a **microparticle** compn. for the delivery of **bioactive agents** into cells that includes a polymeric matrix, an **anionic** or zwitterionic lipid having a pKa of < .apprx. 2.5, and a **bioactive agent**, e.g. a peptide, protein, or **nucleic acid**. The compns. of the invention can be used to deliver bioactive compds., such as **nucleic acids** encoding immunostimulatory peptides and/or therapeutic proteins. For example, poly(glycolic acid-lactic acid) **microparticles** contg. **DNA** encoding a peptide having an amino acid sequence of proteolipid protein (PLP) were prepd. and injected i.v. to a multiple sclerosis patient whose T cells secrete excess Th1 cytokines (i.e., IL-2 and .gamma.-IFN). Expression of PLP-like peptide by APCs results in the switching of the cytokine profile of the T cells, such that they instead produce Th2 cytokines (i.e., IL-4 and IL-10) in response to autoantigens. Also, **DNA** encapsulated in PEG-DSPE contg. **microparticles** was protected from the nuclease, compared to **DNA** in non-lipid contg. **microparticles**.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 17 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 2001:814004 CAPLUS

DN 135:341136
TI Preparation of luminescent-doped inorganic **nanoparticles** and usage as labels for biomolecule probes
IN Hoheisel, Werner; Petry, Christoph; Bohmann, Kerstin; Haase, Markus; Riwotzki, Karsten
PA Bayer A.-G., Germany
SO Ger. Offen., 12 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10106643	A1	20011108	DE 2001-10106643	20010212
	WO 2001086299	A2	20011115	WO 2001-EP4545	20010423
	WO 2001086299	A3	20020523		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI DE 2000-10021674 A1 20000505
DE 2001-10106643 A 20010212
AB The invention concerns luminescent-doped inorg. **nanoparticles** that are used as labels for affinity mols. e.g. **nucleic acids**, antibodies, proteins, etc.; affinity mols. are directly attached to the **nanoparticles** or via linker groups, e.g. thiols, amines, imidazoles, mol. self-assemblies, etc. Thus europium-doped phosphoric acid, lanthanum(3+) salt (1:1) was prepd. by a previously described wet chem. method; the obtained milky dispersion was centrifuged, dialyzed and dried to obtain the desired particle size. The LaPO4:Eu **nanoparticles** were coated with silica using a basic sodium water glass soln.; sepd. by ethanol pptn., centrifugation, ultrasound dispersion, decanting and drying. The silica coated **nanoparticles** were amine-activated with 3-aminopropyltriethoxysilane and treated with sulfosuccinimidyl 4-(N-maleimidomethyl)cyclohexane-1-carboxylate (sulfo-SMCC) crosslinker. Antibodies to .alpha.-actin were thiol-activated in a 2-iminothiolane soln. and incubated with the treated luminescent-doped inorg. **nanoparticles**; the obtained luminescent probes were used to visualize actin filaments in rabbit muscles by confocal laser scanning microscopy.

L14 ANSWER 18 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 2001:780650 CAPLUS
DN 135:335149
TI Particulate compositions based on crosslinked polymers
IN Dickinson, Paul Alfred; Kellaway, Ian Walter; Howells, Stephen Wyn
PA University College Cardiff Consultants Limited, UK
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001078689	A2	20011025	WO 2001-GB1752	20010418
	WO 2001078689	A3	20020328		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI GB 2000-9773 A 20000419

AB **Nanoparticles** are prepd. from a colloidal system comprising a continuous phase and micelles, the micelles comprising surfactant material. A microemulsion is formed by admixing the colloidal system with a soln. of an active material, such as a medicament, dissolved in a solvent wherein the soln. forms a disperse phase with the micelles of surfactant material. At least the dispersed phase is quenched to a solid state and the continuous phase and solvent are removed to produce the **nanoparticles**. The **nanoparticles** can be incorporated in an aerosol compn. suitable for deep lung delivery by means of a metered dose inhaler. For example, **nanoparticles** were formed using iso-octane, the lecithin/propanol-2-ol (1:3 by wt.) surfactant system including as the active material pEGFP-N1 reporter plasmid **DNA** (4700 base pairs). The particles also contained protamine sulfate (1:1 by wt. with respect to pDNA) and sucrose at a concn. of 0.5M in the aq. phase.

L14 ANSWER 19 OF 34 CAPLUS COPYRIGHT 2002 ACS

AN 2001:636468 CAPLUS

DN 135:252520

TI Dimerizable **Cationic Detergents** with a Low cmc Condense Plasmid DNA into Nanometric Particles and Transfect Cells in Culture

AU Dauty, Emmanuel; Remy, Jean-Serge; Blessing, Thomas; Behr, Jean-Paul

CS Laboratoire de Chimie Genetique, CNRS/Universite Louis Pasteur de Strasbourg Faculte de Pharmacie, Illkirch, 67401, Fr.

SO Journal of the American Chemical Society (2001), 123(38), 9227-9234 CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

AB The size of condensed DNA particles is a key determinant for in vivo diffusion and gene delivery to cells. Gene mols. can be individually compacted by **cationic** thiol **detergents** into nanometric particles that are stabilized by oxidative conversion of the **detergent** into a gemini lipid. To reach the other goal, gene delivery, a series of **cationic** thiol **detergents** with various chain lengths (C12-C16) and headgroups (ornithine or spermine) was prepd., using a versatile polymer-supported synthetic strategy. Crit. micelle concns. and thiol oxidn. rates of the **detergents** were measured. The formation and stability of complexes formed with plasmid DNA, as well as the size, .xi.-potential, morphol., and transfection efficiency of the particles were investigated. Using the tetradecane/ornithine **detergent**, a soln. of 5.5 Kpb plasmid DNA mols. was converted into a homogeneous population of 35 nm particles. The same **detergent**, once oxidized, exhibited a typical lipid phase internal structure and was capable of effective cell transfection. The particle size did not increase with time. Surprisingly, the gel electrophoretic mobility of the DNA complexes was found to be higher than that of plasmid DNA itself. Favorable in vivo diffusion and intracellular trafficking properties may thus be expected for these complexes.

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 20 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 2001:416801 CAPLUS
DN 135:24735
TI Electropolymerizable monomers and polymeric coatings on implantable devices
IN Domb, Abraham J.
PA Efrat Biopolymers Ltd., Israel
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001039813	A1	20010607	WO 2000-IL807	20001130
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1233795	A1	20020828	EP 2000-979913	20001130
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRAI	US 1999-168626P	P	19991203		
	WO 2000-IL807	W	20001130		

AB The invention provides an electropolymerizable monomer comprising a chem. bound active agent for coating of implantable devices, e.g., stents. The monomer is a deriv. of pyrrole, thiophene, carbazole, indole, tyramine, tyrosine, aniline, naphthalene, anthracene, and quinoline. The active agent, such as heparin, a heparinoid, an oligonucleotide, **DNA**, plasmid, an antithrombotic, anti-inflammatory, or antiproliferative agent, is capable of affecting animal tissue and is released in a controlled manner over a period of 12 h to several months. It is selected from free or conjugated mols. or mols. encapsulated in a controlled delivery system, such as polymer **microparticles**. A polymeric coating on implantable devices with metallic surfaces is prepd. by electropolymn. of oxidizable monomers. The coating is capable of protecting the device and the patient from thrombosis and unwanted tissue reactions. For example, **nanoparticles** having pyrrole derivs. bound to the surface and available for electropolymn. were prepd. by polymn. of N-pyrrole-PEG2000-OH (prepd. from the reaction of bromo-PEG2000-hydroxyl) with lactide using stannous octoate as catalyst. The block copolymer was then mixed with polylactide and PEG-poly(lactic acid) in a CHCl3 soln. The CHCl3 soln. was added dropwise to a stirring buffer soln. (0.01M phosphate pH 7.4) to form **nanoparticles** with PEG-pyrrole on the surface available for electropolymn. and deposition at the stent wire.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 21 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 2001:380740 CAPLUS
DN 135:2553
TI **Microparticle**-based transfection and activation of dendritic cells
IN Donnelly, John James; Denis-Mize, Kimberly Sue; Ott, Gary Steven

PA Chiron Corporation, USA
SO PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001036599	A1	20010525	WO 2000-US31776	20001117
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1235900	A1	20020904	EP 2000-978815	20001117
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRAI US 1999-166514P	P	19991119		
WO 2000-US31776	W	20001117		

AB The present invention provides an effective method for the transfection of dendritic cells by non-viral methods. The present invention provides this benefit by incubating dendritic cells and a specified transfection agent. The transfection agent comprises a polynucleotide and **microparticles**, with the **microparticles** being comprised of biodegradable polymer and **cationic detergent**. The dendritic cells and transfection agent are incubated for a time sufficient to transfect the dendritic cells with the polynucleotide. Poly(D,L-lactide-co-glycolide)-CTAB-**DNA microparticles** were efficiently internalized by dendritic cells. The **DNA** was pCMVgag plasmid encoding HIV p55 gag protein under the control of the cytomegalovirus early promoter. The activated dendritic cells stimulated T cells.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 22 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 2001:376994 CAPLUS
DN 135:4460
TI Immunoassay of **antigen** and antibody by using **microparticles** of organic-inorganic complexes
IN Tanba, Atsushi; Matsui, Hideo; Adachi, Toshiyuki
PA Kansai Research Institute Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001141729	A2	20010525	JP 1999-326710	19991117

AB Disclosed is a simple, highly sensitive, high quant. immunoassay method for detn. of **antigen** or antibody. The immunoassay uses **microparticles** contg. particulate core of inorg. compd. coated with org. compd. The quantification is based on the detn. of e.g. inorg. dye-, fluorescent dye-, or radioisotope-contg. core after solubilized with inorg. salt, alk. soln. and **anionic** org. **surfactant**.

L14 ANSWER 23 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 2000:672202 CAPLUS
DN 134:227185
TI Characterization of **cationic microparticles** with adsorbed plasmid **DNA**
AU Singh, Manmohan; Briones, Maylene; Kazzaz, Jina; Donnelly, John; O'Hagan, Derek
CS Chiron Corporation, Emeryville, CA, 94608, USA
SO Proceedings of the International Symposium on Controlled Release of Bioactive Materials (2000), 27th, 548-549
CODEN: PCRMEY; ISSN: 1022-0178
PB Controlled Release Society, Inc.
DT Journal
LA English
AB The authors were able to adsorb functionally intact plasmid **DNA** on **cationic microparticles** prepd. with CTAB as a **surfactant**. The PLG-CTAB-**DNA** adsorbed formulation was able to generate significantly higher in vivo antibody response in mice and guinea pigs than naked **DNA** at the same dose.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 24 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 2000:98268 CAPLUS
DN 132:156844
TI Lipid emulsion and solid lipid **nanoparticle** as a gene or drug carrier
IN Jeong, Seo Young; Kwon, Ick Chan; Chung, Hesson
PA Korea Institute of Science and Technology, S. Korea
SO PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000006120	A1	20000210	WO 1999-KR414	19990730
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9950689	A1	20000221	AU 1999-50689	19990730
	KR 2000012106	A	20000225	KR 1999-31339	19990730
	EP 1100464	A1	20010523	EP 1999-935145	19990730
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002521423	T2	20020716	JP 2000-561977	19990730
PRAI	KR 1998-31249	A	19980731		
	WO 1999-KR414	W	19990730		

AB The present invention relates to oil-in-water lipid emulsions composed of non-triglyceride oils and solid lipid **nanoparticles** (SLN) composed of triglyceride or Et stearate used as gene transfection agents and drug delivery systems and method for prepg. thereof. The present invention also concerns the method of transferring genes or drugs efficiently into cells by using the lipid emulsions and solid lipid **nanoparticles**. Also the present invention relates to the method

of prepg. lipid emulsions contg. lipophilic or amphiphilic drugs by using squalene or squalane as the core oil. The present invention also concerns the method of prepg. the solid lipid **nanoparticles** contg. lipophilic or amphiphilic drugs by using Et stearate as the core fat.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 25 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 1999:690937 CAPLUS
DN 131:314179
TI **Microspheres** contg. condensed polyanionic bioactive agents such as **nucleic acids** and methods for their prodn.
IN Levy, Robert J.; Labhasetwar, Vinod D.; Cohen, Hagit
PA The Regents of the University of Michigan, USA
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9953903	A1	19991028	WO 1999-US7383	19990423
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2002012652	A1	20020131	US 1998-65892	19980423
	US 6395253	B2	20020528		
	AU 9938606	A1	19991108	AU 1999-38606	19990423
	US 2002146459	A1	20021010	US 2002-116093	20020404
PRAI	US 1998-65892	A2	19980423		
	WO 1999-US7383	W	19990423		

AB The present invention relates to novel compns. comprising **microspheres** and/or nanospheres contg. condensed polyanionic bioactive agents, such as **DNA**. The polyanionic bioactive agent in the **microspheres** and/or nanospheres is preferably condensed using a polycationic condensing agent, such as poly-L-lysine. The present invention further relates to methods for producing the **microspheres** and/or nanospheres contg. condensed polyanionic bioactive agents.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 26 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 1998:542947 CAPLUS
DN 129:166195
TI **RNA**- and **DNA**-based active agents in **nanoparticles**
IN Gurny, Robert
PA Switz.
SO PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	WO 9833478	A2	19980806	WO 1998-EP420	19980126
	WO 9833478	A3	19981210		
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	EP 860167	A1	19980826	EP 1997-101450	19970130
	R: GB				
	AU 9866163	A1	19980825	AU 1998-66163	19980126
PRAI	EP 1997-101450		19970130		
	WO 1998-EP420		19980126		

AB The invention relates to a pharmaceutical compn. which is suitable for the incorporation of **RNA**- and **DNA**-based active agents in **nanoparticles**, which are efficient as drug carriers. The active agents may be oligonucleotides or so-called "smart biol. bombs". The compn. is characterized by the following components: (a) the active agent to be incorporated in combination with **cationic surfactants** within **nanoparticles** by dispersion methods; (b) a pharmaceutically acceptable biodegradable synthetic polymer which is suitable for the formation of **nanoparticles**; (c) and, optionally, further pharmaceutically acceptable additives.

L14 ANSWER 27 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 1998:246656 CAPLUS
DN 128:291121
TI Mixtures of silica particles with **cationic** or hydrophobic surfaces for the recovery of nucleic acids from biological fluids
IN Ortigao, Jose Flavio R.; Siegel, Rolf
PA Interactiva Biotechnologie G.m.b.H., Germany
SO Ger. Offen., 6 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19641014	A1	19980416	DE 1996-19641014	19961006

AB Particles of silica with their **surfaces modified** with **cationic** or hydrophobic groups are used in mixts. to recover nucleic acids from biol. samples. Different ratios of **cationic surface-modified** to hydrophobic **surface-modified** particles can be used for different purposes, e.g. a high content of hydrophobic particles would be used in the recovery of poly(A)+ mRNA and the recovery of total DNA would use a mixt. high in **cationic** particles. The particles can be used in batch or column chromatog. sepns. Prepn. of a **cationic surface-modified** silica using 3-aminopropyl trimethoxysilane and of a hydrophobic sorbent using triphenylchlorosilane is described. Use of these sorbents in the recovery of plasmid DNA from alk. lysates is demonstrated.

L14 ANSWER 28 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 1996:142208 CAPLUS
DN 124:170014
TI **Particle carriers** coated with polymer for enzyme or antibody immobilization for clinical diagnosis

IN Sasaki, Motohiro; Yoshioka, Katsuaki; Nagai, Katsutoshi
PA Nippon Paint Co Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07316466	A2	19951205	JP 1994-108737	19940523

AB Copolymer of radically polymerizable unsatd. **cationic surfactant** and monomer is disclosed for coating **particle carrier** to facilitate enzyme or antibody immobilization for immunoassay and clin. diagnosis. In example, Fe/Mn-contg. magnetic styrene particles were prepd., coated with copolymer of 4-dimethylsulfonylphenyl 10-undecylenic acid ester Me sulfate salt and di-Bu fumarate, styrene, di-Et fumarate, or Me methacrylate, and tested for their ability to capture **antigen** or antibody.

L14 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 1990:95101 CAPLUS
DN 112:95101
TI Manufacture of HIV-2 (human immunodeficiency virus type 2) antigen and its use in detection of antibody
IN Fujino, Ryuichi; Hamakado, Toshinari
PA Fujirebio, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01193648	A2	19890803	JP 1988-16847	19880129
JP 2852656	B2	19990203		

AB HIV-2 virus is cultured in HIV-2 virus-producing cells and treated with **anionic surfactants** to give HIV-2 **antigen** for use in the sensitization of **carrier particles** for agglutination immunoassay of antibody to HIV-2 virus. Thus, HIV-2 was cultured in Molt-4 cells, treated with SDS, and immobilized on gelatin particles for use in the detection of antibody to HIV-2 in serum.

L14 ANSWER 30 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 1985:75293 CAPLUS
DN 102:75293
TI Serological reagent
IN Yanovsky, Jorge Fernando
PA Argent.
SO Fr. Demande, 15 pp.
CODEN: FRXXBL
DT Patent
LA French
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2543300	A1	19840928	FR 1984-3514	19840307
FR 2543300	B1	19861212		
US 4609630	A	19860902	US 1984-583262	19840224
BR 8401196	A	19851029	BR 1984-1196	19840313
BR 8401257	A	19841030	BR 1984-1257	19840314
PRAI AR 1983-292484		19830323		

AR 1984-295500 19840120

AB A reagent for the detn. of **antigens** and antibodies by agglutination tests with sensitivities and specificities higher than in previous techniques is described that is based on the interdependent action of 2 active components used in a single diagnostic unit and that permits both inhibition of lectin-type factors or nonspecific antibodies as well as the detection of the specific **antigens** or antibodies. The reagent contains appropriate **antigens** or antibodies as well as .gtoreq.1 compd. of the following type: sugars, amino sugars, lipids, glycerophosphates, choline esters and ethers, sphingomyelins, salts of choline, and other derivs. of quaternary ammonium compds. Examples are given for suppression of the nonspecific reactivity in the detection of antibodies to Trypanosoma cruzi in human serum by using a reagent that contains erythrocytes sensitized with **antigens** from T. cruzi and the inhibitors phosphorylcholine and galactose, in the detection of antibodies in human serum in hepatitis B by using a reagent that contains erythrocytes sensitized with antibody against hepatitis B surface **antigen** and the inhibitors lecithin and glucosamine, and in the diagnosis of toxoplasmosis by using a reagent that contains cellulose nitrate **microspheres** coupled to **antigens** from Toxoplasma gondii and the inhibitors N-acetylgalactosamine and phosphatidylcholine.

L14 ANSWER 31 OF 34 CAPLUS COPYRIGHT 2002 ACS
AN 1983:122426 CAPLUS
DN 98:122426
TI Support material for use in serological testing
IN Ikeda, Mikio; Tomizawa, Takayuki
PA Fujizoki Pharmaceutical Co., Ltd., Japan
SO Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 62968	A1	19821020	EP 1982-301235	19820311
	EP 62968	B1	19851121		
	EP 62968	B2	19910710		
	R: CH, DE, FR, GB, IT, NL				
	JP 57153658	A2	19820922	JP 1981-37855	19810318
	JP 63029223	B4	19880613		
	JP 57160465	A2	19821002	JP 1981-46211	19810331
	JP 63032146	B4	19880628		
	JP 58113754	A2	19830706	JP 1981-209868	19811228
	JP 63032147	B4	19880628		
	JP 58113755	A2	19830706	JP 1981-209869	19811228
	JP 63032148	B4	19880628		
	JP 58113756	A2	19830706	JP 1981-209870	19811228
	JP 63032149	B4	19880628		
	JP 58113757	A2	19830706	JP 1981-209871	19811228
	JP 63032150	B4	19880628		
PRAI	JP 1981-37855		19810318		
	JP 1981-46211		19810331		
	JP 1981-209868		19811228		
	JP 1981-209869		19811228		
	JP 1981-209870		19811228		
	JP 1981-209871		19811228		

AB Artificial supports, which are prepd. from gelatin, a water-sol. polysaccharide, and an alkali metal metaphosphate, and which are insolubilized by crosslinking with an aldehyde, are described for use as

diagnostic reagents after the immobilization of antibodies, **antigens**, or enzymes on them. Such supports can be prepd. easily and cheaply on a large scale, have a uniform particle size, and are superior to mammalian erythrocyte supports because of their chem. and phys. properties and lack of antigenic activity. Thus, for the detection of antibodies to Treponema pallidum in human blood serum in syphilis diagnosis, a support was prepd. from gelatin, gum arabic, Na hexametaphosphate, Demol Ep, and Reactive Blue, and was crosslinked by glutaraldehyde. The yield of **carrier particles** was 7.7 g, and 75% of the particles were in the range 3-6 .mu.m. The particles were treated with tannic acid and sensitized with T. palladium for the syphilis test.

L14 ANSWER 32 OF 34 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2002:557982 BIOSIS
DN PREV200200557982
TI Method for isolating **anionic** organic substances from aqueous systems using **cationic** polymer **nanoparticles**.
AU Bayer, Ernst (1); Fritz, Hans; Maier, Martin; Schewitz, Jens; Gerster, Michael
CS (1) Tubingen Germany
ASSIGNEE: Degussa AG, Trostberg, Germany
PI US 6447764 September 10, 2002
SO Official Gazette of the United States Patent and Trademark Office Patents, (Sep. 10, 2002) Vol. 1262, No. 2, pp. No Pagination. http://www.uspto.gov/web/menu/patdata.html. e-file. ISSN: 0098-1133.
DT Patent
LA English
AB The invention relates to a method for isolating **anionic** organic substances from aqueous systems using polymer **nanoparticles** with **cationic** pH-sensitive surface groups. Extraction can be carried out directly from diluted solutions, biological media (blood plasma, serum, urine, etc.) and complex buffer systems (e.g. PCR preparations contain **detergents**) without prior derivatization of the samples or addition of binding buffers. After separation from the surrounding medium the conjugates of the corresponding substances and polymer **nanoparticles** obtained in this manner can be purified through additional washing steps and effectively desalinated. Owing to the pH-sensitivity of the basic surface groups, the bound substances can be released in a targeted manner after separation by modification of the pH of the medium. By using volatile bases contamination of the released samples with ionic residues can be avoided. By adding small quantities of SDS and acetonitrile during the separation stage, the sensitivity of the method can be raised further, especially when the substance to be isolated are present in low concentrations (lt;1 mumol/L). The method is a method of extraction with universal application, suitable for both low-molecular **anionic** compounds as well as peptides, **nucleic acids** and **nucleic acid** derivatives. Recovery rates are up to 100%.

L14 ANSWER 33 OF 34 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2002:490537 BIOSIS
DN PREV200200490537
TI Charged PLG **microparticles** for delivery of **DNA** and proteins.
AU Singh, Manmohan (1); Briones, Maylene (1); Soenawan, Elawati (1); Ugozolli, Mildred (1); Kazzaz, Jina (1); O'Hagan, Derek (1)
CS (1) Chiron Corporation, 4560 Horton St., Emeryville, CA, 94608: Manmohan_signh@chiron.com USA
SO Abstracts of Papers American Chemical Society, (2002) Vol. 224, No. 1-2,

pp. BIOT 312. print.
Meeting Info.: 224th National Meeting of the American Chemical Society
Boston, MA, USA August 18-22, 2002
ISSN: 0065-7727.
DT Conference
LA English

L14 ANSWER 34 OF 34 SCISEARCH COPYRIGHT 2002 ISI (R)
AN 2002:329569 SCISEARCH
GA The Genuine Article (R) Number: 542DJ
TI **Anionic surfactants** as nanotools for the alignment of non-spherical zeolite nanocrystals
AU Kulak A; Lee Y J; Park Y S; Kim H S; Lee G S; Yoon K B (Reprint)
CS Sogang Univ, Ctr Microcrystal Assembly, Seoul 121742, South Korea (Reprint); Sogang Univ, Dept Chem, Seoul 121742, South Korea
CYA South Korea
SO ADVANCED MATERIALS, (4 APR 2002) Vol. 14, No. 7, pp. 526-+.
Publisher: WILEY-V C H VERLAG GMBH, PO BOX 10 11 61, D-69451 WEINHEIM, GERMANY.
ISSN: 0935-9648.
DT Article; Journal
LA English
REC Reference Count: 28
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Zeolite microspherulites are produced upon sonication of non-spherical zeolite nanocrystals in water-in-oil emulsions. The zeolite nanocrystals in the outermost two layers of the microspherulites align with high ordering upon the addition of **anionic surfactants**. Highly perforated microspherulites are obtained by shorter sonication times. The Figure shows a zeolite-X spherulite and surface details.